Exhibit B

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Mr. Henrik Parker
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Re: Ocean Semiconductor's infringement contentions in *Ocean Semiconductor LLC v. STMicroelectronics, Inc.*, No. 6:20-cv-1215 (W.D. Tex.)

Dear Mr. Parker,

On July 2, 2021, STMicroelectronics, Inc. ("ST Inc.") received infringement contentions ("Infringement Contentions") from Ocean Semiconductor LLC ("Ocean") relating to the eight asserted patents in the above-captioned action. Ocean's Infringement Contentions are deficient in numerous respects. To begin, Ocean purports to assert over 90 claims against ST Inc. The number of asserted claims is excessive and unreasonable, imposing a heavy burden on the court and the parties. The vast scope of Ocean's contentions renders them defective. ST Inc. therefore requests that Ocean narrow the number of claims to 50 or fewer on or before August 20, 2021. If Ocean refuses to narrow its asserted claims, ST Inc. reserves the right to seek relief from the court. In addition, as described below, Ocean's contentions relating to specific asserted patents suffer from fundamental and fatal flaws. If Ocean does not withdraw its defective contentions, ST Inc. reserves the right to seek attorneys' fees relating to its defense against Ocean's frivolous assertions. Furthermore, given Ocean's vague and inadequate Infringement Contentions, ST Inc. will attempt to collect and produce technical documents "sufficient to show the operation of the accused product(s)" pursuant to the court's Scheduling Order (Dkt. 34); however, ST reserves the right to bring the inadequacies and deficiencies in Ocean's Infringement Contentions to the attention of the court should Ocean fail to promptly remedy the issues.

'651 patent

The deficiencies in Ocean's contentions for the '651 patent are legion. First, claims 19-24 require "a plurality of pneumatic cylinders that are operatively coupled to said wafer stage to accomplish at least one of raising, lowering and varying a tilt of said surface of said wafer stage." Claims 75 and 81 similarly require "wherein adjusting said surface of said wafer stage comprises adjusting said surface of said wafer stage by actuating at least one of a plurality of pneumatic cylinders that are operatively coupled to said wafer stage." Ocean asserts that Lorentz actuators meet the claimed "pneumatic cylinders" limitation. However, Lorentz actuators (i.e.,

electromagnetic actuators) are not pneumatic cylinders, as the '651 patent itself teaches. *See* '651 patent, 5:65–6:1 ("A mechanism useful in adjusting the position of the wafer stage 40 may be comprised of any of a variety of devices, such as pneumatic, hydraulic, electromagnetic or mechanical systems.).

Second, Ocean asserts that the accused TWINSCAN lithography tool performs etching and deposition. *See, e.g.*, Infringement Contentions, Appendix A1 at 17-21. Not so. The TWINSCAN tool is a lithography machine and is not capable of performing etching or deposition; nor does it include an "etching chamber" or "deposition chamber." The citations Ocean provided do not show otherwise; rather, they demonstrate that any alleged etching or deposition is performed by separate machines (i.e., ones that are necessarily outside and separate from both the accused TWINSCAN tool and the alleged "process chamber" containing the alleged adjustable wafer stage). Even a cursory review of public literature describing the TWINSCAN tool confirms that it does not perform these functions.

Third, claim 24 requires that each "pneumatic cylinder" be "operatively coupled to said wafer stage by a ball and socket connection." Ocean asserts that "ball bearings" that "cooperat[e] with" "linear actuators" (motors) satisfy the claimed "ball and socket connection." *See* Infringement Contentions, Appendix A1 at 29-30 (quoting "Position Control" at 31). This assertion suffers from two fatal flaws: (i) the identified movement is "horizontal" (not raising, lowering, or tilting, as the claim requires); and (ii) the ball bearings are not operatively coupled to the Lorentz actuators (i.e., what Ocean asserts are the "pneumatic cylinders") but are instead described in connection with the linear motors.

Fourth, claims 21, 73, and 78 require that the wafer be positioned on the stage "after said wafer stage has been adjusted." Ocean asserts generally that "the TWINSCAN system positions the wafer on the exposure table of the dual-wafer stage after the exposure of a previous wafer is done and the exposure table is adjusted to receive a new wafer for the next cycle of exposure," pointing only to a thesis that describes that the wafer and reticle stages move in a "synchronized zig-zag" during the "scan movement" (i.e., when the wafer is already on the stage) and that the reticle returns "to its initial position" during the "step movement":

> The reticle with circuit pattern is placed on a reticle stage (RS), whereas the silicon wafer is placed on a wafer stage (WS). During the scan movement the light is switched on with a desired dose and the exposure process starts. The stages move according to each other performing synchronized zig-zag movements. Next during the step movement the light is switched off, the reticle goes back to its initial position and the silicon wafer is prepared for exposure of a next die. The process repeats itself until all of the dies have been processed. Next, the reticle mask is replaced with a new one and

> the process can start all over again, exposing a new layer on top of the previous one. The exposure of consecutive layers needs to be done with nanometer precision in order to deliver highest quality circuits.

See, e.g., Infringement Contentions, Appendix A-1 at 28. The quoted language, and Ocean's contentions generally, do not provide any evidence that the wafer is placed on the wafer stage after the stage has been adjusted (raising, lowering, or tilting, as required by the claims). In fact, the quotation demonstrates the opposite. During the "synchronized zig-zag movements," the wafer is already on the stage. This "zig-zag" is also a horizontal movement, not the claimed raising, lowering, or tilting. And during the "step movement," only the reticle is described as moving.

Fifth, claims 31-32 and 34-37 require "performing said process operation on at least one subsequently processed wafer positioned on said wafer stage in said process chamber after said plane of said wafer stage has been adjusted." Per the claims, this "adjust[ment]" is "based upon said measured across-wafer variations [of a plurality of processed wafers]." Here too, Ocean's purported evidence actually shows the opposite (i.e., a wafer is positioned on the stage and then the stage is adjusted) and, in any event, there is no evidence that the adjustment is based upon the measured across-wafer variations. For example, Ocean asserts that "the TWINSCAN system performs the process operation on at least one subsequently processed wafer positioned on the wafer stage in said process chamber after the plane of the wafer stage has been adjusted," and quotes various excerpts from the "Position Control" article. *See* Infringement Contentions, Appendix A-1 at 42-43. However, to the extent that Ocean's citations even describe stage adjustment at all (many do not), they describe adjustments that occur after the wafer is already on the stage (e.g., during the scanning of a wafer). Even the etching and deposition citations (which, as discussed above, the TWINSCAN tool does not do) fail to show the claimed requirements. Simply put, there is no evidence that a wafer is positioned on the stage after the stage is adjusted—let alone that this adjustment occurs "based upon said measured across-wafer variations."

Sixth, claims 31-32 and 34-37 require (i) "performing a process operation in a process tool on each of a plurality of wafers," (ii) "measuring a plurality of said processed wafers to determine across-wafer variations produced by said process operation performed in said process tool," (iii) "adjusting, based upon said measured across-wafer variations, a plane of a surface of an adjustable wafer stage," and (iv) "performing said process operation on at least one subsequently processed wafer positioned on said wafer stage in said process chamber after said plane of said wafer stage has been adjusted." Note that the wafer stage adjustment (for the processing of a *subsequent* wafer) must be based on *across-wafer variations* that can only be determined using measurements from a *plurality* of the processed wafers. In contrast, Ocean's contentions appear to allege measurement of a *single* wafer, resulting in adjustments to the stage while *the same*

wafer is still on the stage (i.e., not across-wafer variations of a plurality of wafers produced by a process operation). Ocean also points to a separate tool (the YieldStar tool) as performing overlay and CD measurements. However, nowhere does Ocean allege that the YieldStar is used together with the TWINSCAN (which itself allegedly has the process chamber with a wafer stage).

Seventh, all asserted claims require a "process chamber." It is not apparent from Ocean's chart what component corresponds to the claimed "process chamber." For example, in its contentions, Ocean includes an arrow to some undefined portion of an undefined TWINSCAN tool, but it fails to show any metes or bounds to the alleged "process chamber" with this annotation. Infringement Contentions, Appendix A1 at 5. Ocean also asserts that "the TWINSCAN system performs the method of providing a process chamber" and points to a photo of a TWINSCAN without any explanation as to which portion or portions of the "TWINSCAN system" is alleged to be the claimed "process chamber." Infringement Contentions, Appendix A1 at 6-7. The remainder of Ocean's contentions similarly lack sufficient detail.

Eighth, Ocean's contentions cite isolated references for individual claim limitations without showing that any accused product is manufactured by a single process that meets all claim limitations. Nor do the contentions accuse a single TWINSCAN tool of allegedly performing each step of the claimed processes. Rather, the chart cherry picks from various different TWINSCAN tools (and, at one point, from the distinct YieldStar tool).

Based on the foregoing, Ocean should immediately withdraw its assertion of at least claims 19-24, 31-32, 34-37, 73, 78, and 80 of the '651 patent against ST Inc.

'330 patent

Ocean's contentions relating to the '330 patent do not support its allegations of infringement. The contentions do not provide any evidence of use relating to the accused YieldStar tool, much less show that any accused product was or is manufactured using the YieldStar tool.

Ocean's contentions for the '330 patent are deficient for other reasons as well. They mix and match assertions about multiple models of the YieldStar tool without specifying which model, if any, is allegedly used to manufacture the accused products and without even attempting to show that all models of YieldStar tools function in the same way. For example, Ocean's contentions point to information about the YieldStar 1375F tool for the key limitation of claim 19: "concurrent measurement of critical dimensions and overlay." But for other limitations, Ocean's contentions point to prior YieldStar models without reference to the 1375F.

Further, Ocean has provided no support for the contention that a grating structure is formed on at least a portion of any wafer relating to the accused products to facilitate concurrent

measurements of one or more critical dimensions and overlay, as required by claims 20 and 21. Ocean's supporting evidence for that limitation does not contain any analysis of the accused products. Instead, the contentions cite generic presentations from ASML and a paper generally related to overlay.

Because Ocean's contentions are so ambiguous, ST Inc. has no notice of what specific structure Ocean contends meets the limitations of claims 20 and 21 of the '330 patent. Accordingly, Ocean should withdraw its infringement allegations at least as to claims 20 and 21.

'402 patent

Ocean's infringement allegations against ST Inc. relating to the '402 patent are similarly deficient. As with the '651 and '330 patents, Ocean's contentions relating to the '402 patent fail to tie its allegations to particular products. Instead, Ocean mixes disclosures from various references, including textbooks, research papers, and a variety of different documents describing various software allegedly supplied by third-party vendors, such as Applied Materials, PDF Solutions, and camLine. But Ocean fails to explain how the cited materials provide evidence regarding how the accused third-party software actually works. Ocean also fails to provide evidence that any of the accused products are actually manufactured using the third-party software. These defects are fatal to Ocean's contentions.

As one specific example, Ocean provides no evidence that the accused third-party software (Applied Materials' E3 software, PDF Solutions' Exensio software, and camLine's LineWorks software) "translat[es] the state data from a first communications protocol to a second communications protocol compatible with the fault detection unit," as claimed in the '402 patent. Although Ocean cites various references that purportedly indicate the third-party software could perform certain functions, there is no evidence that the products do, in fact, operate in accordance with the disclosures of the cited references. Further, Ocean does not even attempt to show that the third-party software could perform the "act of sending," as required by the claims in the '402 patent. Similar problems permeate Ocean's remaining contentions relating to the '402 patent.

Due to these issues, and others, Ocean has not provided adequate infringement contentions relating to the '402 patent. Ocean has fallen far short of alleging infringement of any of the claims of the '402 patent and should therefore withdraw its contentions against ST Inc. for this patent in its entirety.

'538 patent

Ocean's infringement allegations relating to the '538 patent are likewise deficient. Ocean makes no effort in its contentions to show that the accused products were made using the third-party

software identified in the contentions (Applied Materials' E3 software, PDF Solutions' Exensio software, and camLine's LineWorks software). It relies instead on conclusory assertions. In short, Ocean provides no credible theory linking the accused products to the third-party software identified in the contentions.

Additionally, Ocean's contentions mix disclosures from various public references, patents, and press releases relating to third-party software without providing any indication that the separate and distinct references all relate to, and describe, the same software. Ocean has failed to provide any connection between the content of the references and the manufacturing processes for the accused products. It also provides no evidence that the referenced third-party software was or is used to create the accused products. To provide one particular example, Ocean cites no evidence that the accused products are manufactured by "performing in said computer the fault detection analysis relating to processing of a subsequent workpiece using said adjusted weighting," as claimed in the '538 patent.

Moreover, as support for its infringement allegations, Ocean points to various references that allegedly indicate that third-party software *can* potentially perform certain functions, but the references do not indicate that that third-party software *must* perform these functions, even if the platforms are used in manufacturing the accused products. The cited references never suggest that the disclosed process must be implemented in the manufacture of any accused product. Ocean's contentions are plainly deficient and do not adequately apprise ST Inc. of its infringement allegations. The assertion of the '538 patent should be promptly withdrawn against ST Inc.

'691 patent

Ocean's contentions against ST Inc. regarding the '691 patent are woefully inadequate. Once more, Ocean's contentions are a convoluted jumble. Ocean mixes disclosures from various generic references, including articles, white papers, corporate disclosures, and patent applications, without linking those materials to the accused products, or the methods used to manufacture them.

Ocean's purported evidence is insufficient for a host of other reasons, including the specific examples provided below. For limitation 1(a), Ocean fails to provide evidence demonstrating "collecting metrology data related to the processing of workpieces in a plurality of tools." For example, Ocean does not identify "a plurality of tools" from which metrology data is collected or demonstrate that there is any collection of "metrology data." Infringement Contentions, Appendix A10 at 3-4. The contentions describe that data are collected "when a lot is processed on a metrology tool" but do not demonstrate any instance of metrology data being collected from a tool or plurality of tools.

Turning to limitation 1(c), Ocean fails to provide evidence of "filtering the metrology data based on the collection purpose data." The contentions relating to Applied Materials' E3 software cite to a document called "Applications of Data Mining" and allege that "the metrology data is filtered based on the collection purpose data for fault detection and classification." *See, e.g.*, Infringement Contentions, Appendix A10 at 11-12. But the cited material does not describe any filtering. The same contentions cite to a document called "Advanced Data Mining" and allege that "metrology data is filtered based on the collection purpose data (e.g., designating P1 for sensor …)." *See, e.g.*, Infringement Contentions, Appendix A10 at 12-13. Yet Ocean provides no evidence for how the cited "sensor priority" disclosures result in "filtering" of the metrology data. The contentions allege that the "system filters the metrology data based on the collection purpose data (e.g., starting quality, thickness/thickness quality, TTV (ME Yield), Lifetime, etc.)." *See, e.g.*, Infringement Contentions, Appendix A10 at 14-15. But the cited text does not describe any "filtering" of such data. Further, there is no evidence regarding this data being "generated." The contentions refer to a document called "Nanochip Fab Solutions" and allege that the "system filters the metrology data based on the collection purpose data in order to predict metrology values for a process." *See, e.g.*, Infringement Contentions, Appendix A10 at 15-16. The cited text describes that "information [is] provided by a fault detection (FD) system along with metrology and context information (e.g., product type) to provide models that predict metrology values for a process." However, there is no evidence that these "models" involve "filtering the metrology data based on the collection purpose data." Contentions relating to a PDF Solutions' Exensio software suffer from similar deficiencies and fail to explain how certain functions filter "metrology data based on the collection purpose data." *See, e.g.*, Infringement Contentions, Appendix A11 at 9-11. Similarly, Ocean provides no evidence to support that camLine's LineWorks software performs the claimed filtering. *See, e.g.*, Infringement Contentions, Appendix A12 at 7-9. None of the cited materials mentions filtering, let alone "filtering the metrology data based on the collection purpose data."

The allegations relating to limitation 1(d) are also deficient. Ocean fails to provide evidence of "conducting a process control activity related to one of the tools based on the filtered metrology data." For example, Ocean cites no evidence that any process control activity is performed, let alone performed "based on the filtered metrology data." *See, e.g.*, Infringement Contentions, Appendix A11 at 11-16. Ocean alleges that PDF Solutions' Exensio software "determine[s] whether to downgrade or scrap the die or chipset package," "identifies losses …, which in turn, allow quick actions," and "identifies invisible defects … and optimizes system performance" without any supporting evidence. *See, e.g.*, Infringement Contentions, Appendix A11 at 11-13. Ocean alleges that the Exensio software "controls activities in fault-detection and classification, testing, assembly and packaging, and data characterization," but the single supporting citation refers only to "Data Collection and Control." *See, e.g.*, Infringement Contentions, Appendix A11 at 14-15. Ocean further alleges that the Exensio software "monitors, triggers alarms, and controls manufacturing tool sets," but the sole supporting citation describes "enabl[ing] identification of tool level sources of yield loss and process variation," not conducting any

activity. *See, e.g.*, Infringement Contentions, Appendix A11 at 15. As to camLine's LineWorks software, Ocean does not identify any "process control activity" that is conducted "based on the filtered metrology data" from the prior limitation. *See, e.g.*, Infringement Contentions, Appendix A12 at 9-16. Ocean simply sites a collection of camLine documents without connecting them to any "filtered metrology data."

The contentions for additional claims reveal more problems. As to claim 2, Ocean fails to provide evidence for "filtering the metrology data based on the identification data and the collection purpose data." Regarding claim 5, Ocean fails to provide evidence of "identifying an absence of a fault condition for a workpiece based on the metrology data" and "changing the collection purpose data responsive to identifying the absence of the fault condition." The contentions relating to claim 8 lack evidence of "excluding metrology data associated with a potential defect condition based on the collection purpose data." The cited evidence does not describe any exclusion of data, nor does the evidence support Ocean's assertion that "targeting would necessarily include the exclusion of certain unnecessary data."

For the reasons explained above, Ocean should withdraw its assertion of at least claims 1, 2, 5, and 8 of the '691 patent against ST Inc.

'305 and '248 patents

The contentions relating to the '305 and '248 patents fare no better than those for the other asserted patents. Again, Ocean fails to provide sufficient evidence to connect the cited materials to the manufacture of the accused products. As with other asserted patents, Ocean's contentions mix disclosures from various generic references, including marketing information, textbooks, and research papers. Ocean does not link any of that material to the actual processes used to manufacture the accused products. In addition, Ocean's contentions mix and match these isolated references for individual claim limitations without showing that any accused product is manufactured in a single process that meets all claim limitations.

Furthermore, in accused proprietary ST software and camLine's LineWorks software, Ocean points to high-level descriptions of manufacturing processes from blogs and marketing materials as practicing the steps of the asserted claims. For instance, as to the alleged proprietary ST software, Ocean points to generic industry descriptions and barebone references to the names of software to indicate what operations are being accused. The cited theses and conference papers similarly fail to tie the accused software to the claims, as they refer simply to "experimental results" or "experimental tests," "schedule simulator," and "use cases." The experimental nature of the papers undercuts any suggestion that the referenced methodologies were ever actually employed in any production lines used to manufacture the accused products. Ocean has not even suggested that the methods described in these references were implemented by ST Inc. or anyone else. And as to camLine's LineWorks software, Ocean cites a tangled collection of camLine

documents and webpages without identifying any evidence of a single process that meets all the limitations of the claims.

Because Ocean's contentions for the '305 and '248 patents do not provide any reasonable basis for the conclusion that the accused products were made using a claimed process, Ocean should immediately withdraw its assertion of these patents against ST Inc.

'097 patent

As with the other asserted patents, Ocean's infringement allegations relating to the '097 patent are deficient. Ocean asserts the '097 patent against accused products without coupling its infringement allegations to those products. For the most part, Ocean's contentions mix disclosures from various generic references, including textbooks and research papers. Ocean fails to link any of that material to the actual manufacturing processes used for the accused products. At most, Ocean can only show that some authors of some articles were employed at an affiliate of ST Inc. That does not connect the content of the articles and the accused products. And Ocean offers no reverse engineering analysis evidence for any of the accused products.

Further, Ocean has provided no evidence that the accused products are manufactured using the isotropic etch step claimed in the '097 patent. As support for its infringement allegations, Ocean points to a paper with one author who was employed at an affiliate of ST Inc. when the paper was published. But that paper never suggests that the disclosed process was implemented in the manufacture of the accused products. Indeed, the article relates to research regarding techniques that might be used in the future for manufacturing nodes below 11 nm. On its face, this exploratory research is untethered to the manufacture of the accused products, and Ocean's infringement allegations fail to identify any evidence to the contrary.

In addition, Ocean's infringement claim chart for the '097 patent cites isolated references for individual claim limitations without showing that any accused product is manufactured in a single process that meets all claim limitations. For instance, Ocean cobbles together several sources to argue that the wafer layer stack limitations of claims 13-14 are met but provides no showing that any specific accused product includes all the claimed layers. And in some cases, Ocean accuses the same products of infringing claims that are mutually exclusive, including claims that require an inorganic hardmask layer (claims 5 and 6) and an organic hardmask layer (claims 7 and 8).

Because Ocean has asserted the '097 patent without even attempting to show that the accused products were made using a claimed process, Ocean should immediately withdraw its assertion of this patent against ST Inc.

For the reasons stated above, Ocean's Infringement Contentions are deficient and must be withdrawn against ST Inc. ST Inc. reserves the right to seek relief from the court should Ocean fail to promptly remedy this situation.

Sincerely,

Tyler R. Bowen

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